

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: Ronald Quan  
Assignee: Macrovision Corporation  
Title: Method For Modifying A Copy Protected Video Signal With A  
Negative Amplitude Pulse (As amended)  
Serial No.: Unknown Filing Date: Herewith  
Examiner: Unknown Group Art Unit: Unknown  
Docket No.: M-2096-4C US

San Jose, California  
September 26, 2001

BOX PATENT APPLICATION  
COMMISSIONER FOR PATENTS  
Washington, D. C. 20231

**PRELIMINARY AMENDMENT**

Dear Sir:

Applicant requests amendment of this application as set forth herein prior to examination.

IN THE TITLE

Please amend the title to read --Method For Modifying A Copy Protected Video Signal With A Negative Amplitude Pulse--.

IN THE SPECIFICATION

At page 1, line 1, please insert the following continuing data:

--CROSS REFERENCE TO RELATED APPLICATIONS

This application is a continuation of Application No. 09/733,659, filed December 7, 2000, which in turn is a continuation of application No. 09/070,958 filed May 1, 1998, now U.S. Patent No. 6,285,765, which in turn is a continuation of application No. 08/753,970 filed December 4, 1996, now U.S. Patent No. 5,748,733, which in turn is a continuation of application No. 08/062,866 filed May 17, 1993, now U.S. Patent No. 5,583,936, and relates to U.S. Patent No. 5,633,927.--

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Beginning on page 65, line 23, through page 66, line 7, please substitute the following paragraph:

The modified video signal provided by the circuit of Figures 42a and 42b causes the AGC amplifier in a VCR to measure incorrectly. As a result based on its measurements of the pseudo sync pulses (and with lowered back porch) paired with AGC pulses of reduced level, it appears to the VCR that a low level video signal is present, and thus the VCR increases the gain of its AGC amplifier. This offsets the reduction of the gain in the AGC VCR amplifier via the basic anticopy process. The added pseudo-sync pulses in the EOF locations each has in one embodiment at least about 2  $\mu$ sec of blanking level (O IRE) following the trailing edge of each added pseudo-sync pulse to defeat the EOF (vertical ) modification. This is accomplished by a switch or waveform replacement circuit as described variously above. This is useful if the high state of the EOF modification has an amplitude greater than 10 to 20 [IPE] IRE. In the absence of the blanking level under these conditions, the EOF modification effect may be reduced but the prior art basic anticopy process effect increased, thus increasing the EOL modification and preventing defeat of the overall anticopy process.

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## IN THE CLAIMS

Please cancel all of the original Claims 1-104 and substitute new Claims 105-116 as follows:

105. A method of modifying a copy protected video signal, wherein the unmodified copy protected video signal includes selected copy protection signals which cause a reduced amplitude in a recording of the copy protected video signal, the method comprising the act of:  
adding a pulse having a selected negative amplitude to a selected position in a back porch region following a horizontal sync pulse of the copy protected video signal.

106. The method of Claim 105 wherein the negative pulse is added to selected active horizontal video lines of the copy protected video signal.

107. The method of Claim 105 wherein the amplitude of the negative pulse is in the range of about -10 to -20 IRE units, has a width in the range of about 1 to 2 microseconds, and is positioned in the range of about 1 to 2 microseconds after a color burst signal.

108. The method of Claim 105, wherein the amplitude of the negative pulse is in the range of about -10 to -20 IRE units.

109. The method of Claim 105, wherein the negative pulse has a width in the range of about 1 to 2 microseconds.

110. The method of Claim 105, wherein the negative pulse is positioned in the range of about 1 to 2 microseconds after a color burst signal.

111. A method of modifying a copy protected video signal, wherein the unmodified copy protected video signal includes selected copy protection signals which cause a reduced amplitude in a recording of the copy protected video signal, the method comprising the act of:  
adding a negative pulse of selected amplitude at a selected position in a back porch region of the copy protected video signal so that the negative pulse is part of the copy protection signal.

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112. The method of Claim 111, wherein the negative pulse is added to selected horizontal video lines of the protected video signal.

113. The method Claim 111, wherein the amplitude of the negative pulse is in the range of about -10 to -20 IRE units, has a width in the range of about 1 to 2 microseconds, and is positioned in the range of about 1 to 2 microseconds after a color burst signal.

114. The method of Claim 111, wherein the amplitude of the negative pulse is in the range of about -10 to -20 IRE units.

115. The method of Claim 111, wherein the negative pulse has a width in the range of about 1 to 2 microseconds.

116. The method of Claim 111, wherein the negative pulse is positioned in the range of about 1 to 2 microseconds after a color burst signal.

#### INVENTORSHIP

Please amend the inventorship so that the sole inventor is now Mr. Ronald Quan.

#### IN THE ABSTRACT

Please cancel the Abstract and substitute the following new Abstract as follows:

--An enhancement is provided for a copy protection method that discourages copying (e.g., by video taping) of video signals. The enhancement adds negative amplitude pulses to the video signal at a location in the horizontal blanking interval "back porch" after the color burst. This enhances jitter when the copy protected signal is recorded on a VCR (video cassette recorder) and the recording is replayed, thereby making the recorded signal not suitable for viewing.--

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## REMARKS

This application is a continuation application.

Support for Claims 105-116 is found at, e.g., page 6, lines 9-15, page 9, lines 20-26, and page 32, lines 12-15, and the accompanying figures. These claims are directed to use of the PPS (post pseudo sync) pulse added to a video signal. In the disclosed embodiments, these PPS pulses enhance copy protection.

For those of the references cited in the attached Information Disclosure Statement ("IDS") which were cited in the applications to which this application claims priority, copies have not been provided with the attached IDS.

Note also in the attached IDS there are citations to and copies of two court documents. Commonly owned and related U.S. Patent 5,633,927 is subject to litigation as set forth in the caption to those two court documents. The relevancy of the two court documents is that they construe claim language of related U.S. Patent 5,633,927. They also are not prior art.

For questions regarding this amendment, please telephone the undersigned at (408) 453-9200.

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Respectfully submitted,



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